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Pradeep Kumar

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Pradeep Kumar
School of Industrial Relations
Queen's University
Kingston, Ontario

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Industrial Relations Centre
Queen's University
Kingston, Ontario
Canada K7L 3N6
613 545-2193

Although collective bargaining is the major vehicle for regulating pay, employment and working conditions in Canada, considerable confusion exists over its precise scope and coverage. The most common measure of the extent of collective bargaining coverage is the proportion of the non-agricultural workforce that is unionized, generally referred to as union density. However, the union density figures, while appropriate for measuring the extent of potential union organization, understate the true impact of union activity since Canadian labour relations statutes require that once a union is certified for purposes of collective bargaining the resulting collective agreement must cover all employees in the bargaining unit whether union members or not. Thus the proportion of employees covered by collective agreements is generally higher than the proportion who are union members. The precise gap between the two measures, however, has been a source of debate due to lack of appropriate data. While there are fairly consistent estimates of union membership produced by Labour Canada and Statistics Canada, there has been, until recently, an unfortunate lack of reliable data on collective bargaining coverage. Available estimates vary considerably, as noted by Adams (1984) and Riddell (1986), and there have been no comparable statistics on union membership and workers covered by collective agreements from a single source.

This paper presents new estimates of unionism and collective bargaining coverage for 1984 from a recent Statistics Canada supplementary labour force survey. The survey collected information on workers who were members of a union as well as those who were not union members but whose wages were covered by a collective agreement negotiated by a union, and provided comprehensive statistics on unionism and the extent of collective bargaining coverage by industry, occupation, age, sex, schooling etc., not hitherto available. This paper presents these figures and compares them, wherever possible, with

estimates from other sources in Canada and with similar estimates in the United States.

I. Sources of Old and New Estimates

Union membership and collective bargaining coverage information in Canada is available from three basic sources: a) union surveys, b) establishment surveys and c) household surveys. Each of the three sources provides conceptually different data and has several advantages and disadvantages. Union surveys generally provide only union membership data. Establishment surveys only collect information on collective agreement coverage. The household surveys provide data on both union membership and collective bargaining coverage. Each of the three sources is different in conceptual framework and methodology.

a) Union Surveys: There are two surveys of union membership in Canada conducted annually, one by Statistics Canada under the Corporations and Labour Unions Returns Act (CALURA), and the other by Labour Canada. The CALURA, enacted by Parliament in 1962 and amended in 1981, applies to "every international and national labour union having 100 or more members resident in Canada which has a local union or branch in Canada or that is carrying on activities in Canada independently of any other labour union" (Statistics Canada, 1987, Foreword). Unions are required under the Act to report information in two parts. In the first part, Schedule V of the annual return, unions have to report the number of their locals with membership by sex for each local, affiliation with central federations, names of officers and employees with title, position and the manner of their election or appointment, trusteeship, number of collective agreements of each local with

names and industry of employers and the total number of employees and union members covered by each collective agreement as well as detailed information on union policies and practices, qualifications for and restrictions on membership, composition and powers of union executive boards, basic rules of government and other characteristics. The second part, Schedule VI of the annual return, is "privileged" and collects information on financial structure of the unions including extensive data on the costs to Canadian workers of union membership such as total salaries of officers and employees, welfare and pension contributions and benefits payments, strike funds and other union reserve funds.

Information from Schedule V and aggregate data from Schedule VI are published by Statistics Canada in the Annual Report under CALURA, usually with a two year lag. The Annual Report includes detailed tables and summary analysis of number of unions and their locals and union membership by type of union, affiliation, province, metropolitan area, and by gender. Also included is information on trusteeships with reasons, number of collective agreements by type of union, percent of workers who are union members and distribution of locals and membership of reporting organizations by industry group, and statements of incomes and expenditures of international and national unions and government employees' organizations. The Supplement to the Annual Report lists all reporting organizations with the names of their principal officers, total membership, number of locals, women members, number of collective agreements, amount of per capital dues etc. by province and metropolitan area.

Although a comprehensive source of union information, the CALURA Report has serious deficiencies. First, it does not cover unions with less than 100 members. Second, because of the lack of specific criteria many independent

associations performing union functions are not fully covered. With the amended legislation in 1981 the coverage has become almost complete for teachers' and nurses' associations but a large number of professional associations (police, firefighters, interns and residents, etc.) are still underrepresented. Finally, although the number of collective agreements are reported, employees and union members covered by collective agreements are not published due to serious response problems.

The Labour Canada survey, conducted annually, is more complete despite the voluntary nature of the survey vehicle. The survey covers all international and national unions and independent local organizations with 50 or more members. The criteria used are: i) affiliation with a central federation, and/or ii) certification as a bargaining agent by a labour relations board. Consequently, many associations (e.g. police, teachers, nurses and university faculty) excluded under CALURA are more fully covered by the Labour Canada survey. Table 1 compares membership of unions included under CALURA and the Labour Canada survey for the year 1984 (the CALURA figures are as of December 31, 1984 while Labour Canada estimates are for January 1, 1985). The figures indicate that Labour Canada estimates are consistently higher than the CALURA estimates reflecting the larger coverage of the Labour Canada survey.

Labour Canada survey estimates are published in the annual Directory of Labour Organizations in Canada which contains a summary; statistical data on union membership by congress affiliation, type of union, and by size; and an alphabetical list of all international and national unions, independent local organizations with 50 or more members, central labour congresses, and other labour organizations. There are two major limitations of the Labour Canada

Table 1

Estimates of Union Membership
from CALURA and Labour Canada Surveys

	Labour Canada Survey	CALURA Survey
Total Union Membership	3.67 million	3.44 million
As a Percent of Non-Agricultural Workforce	39.6 percent	35.6 percent
By Affiliation (in '000)		
CLC	2,119.72	1,978.98
CNTU	211.02	198.17
CFL	209.89	203.97
AFL-CIO only	144.63	125.96
CSD	39.89	18.29
CCU	37.16	31.56
Unaffiliated	807.96	779.04
International	104.07	90.38
National	703.89	678.66
Independent Local Organizations	95.44	112.68
Type of Union (in '000)		
International	1,444.83	1,382.80
National	2,095.46	1,916.81
Directly Chartered Unions	29.95	26.26
Independent Local Organizations	95.44	112.78
By Membership Size ('000)		
Under 100 members	0.33	-
100 - 999	24.79	55.23
1,000 - 4,999	223.45	231.34
5,000 - 9,999	216.06	259.20
10,000 - 29,999	702.53	716.99
30,000 - 49,999	455.39	490.99
50,000 and over	1,917.70	1,717.42

Estimates of Union Membership continued

	Labour Canada Survey	CALURA Survey
Unions With 50,000 And More Members (in '000)		
CUPE	296.0	299.46
NUPGE	245.0	225.04
PSAC	181.5	181.25
USWA	148.0	149.94
UFCW	146.0	157.93
UAW/CAW	135.8	118.44
Social Affairs Federation	93.0	89.84
Teamsters	91.5	81.69
Quebec Teaching Congress (CEQ)	90.0	89.94
Carpenters	73.0	64.96
Service Employees International	70.0	70.09
IBEW	68.6	68.51
CPU	63.0	65.72
IAM	58.6	54.62
Quebec Government Employees' Union	55.2	(43.63)
Labourers' International	51.4	(44.72)
IWWA	51.2	(44.07)
Membership of unions[1] listed in CALURA but not in Labour Canada Survey (in '000)	-	6.52
Membership of national and international unions[2] listed in Labour Canada Survey but not in CALURA survey (in '000)	59.81	-

1 Unions listed in CALURA survey but not found in Labour Canada's Directory of Labour Organizations, 1985, are: Brewery, Winery and Distillery Workers Union, Local 300; Quebec Federation of Forestry Workers; Association of General Practitioners of Laval; Home Care Employees Association; Interior Brewery Workers, Local 308; and Canadian Union of Restaurant and Related Employees.

2 There are as many as 37 national and international unions listed in the Directory of Labour Organizations but not covered by the CALURA survey. Their membership ranges between 53 and 10,000. Included among these are such large unions as Nurses Union of Newfoundland (3,090 members), Ontario Professional Firefighters Association (4,500 members), Quebec Provincial Police Association (4,413 members), Seafarers' International Union of Canada (3,064 members), Maritime Fishermans Union (3,000) and the National Brotherhood of Carpenters, Joiners, Foresters and Industrial Workers (Fraternite nationale des Charpentiers - Menuisiers, Forestiers et Travailleurs d'usine) with a membership of 10,000 in 1984.

survey information. First, small independent local organizations with 50 or fewer members are not covered. Second, the information is not broken down by sex, industry, province etc. to permit computation of union density rates (such classifications were published until 1977 through a special survey).

b) Establishment Surveys: Establishment surveys are the principal source of information on collective bargaining coverage. Labour Canada's annual survey of Wages and Working Conditions in Canada is the oldest and most comprehensive establishment survey: since 1957 it has provided data on percent of employees covered by collective agreements by occupational group (office, non-office and others), province and industry together with extensive information on wage rates and hours of work by union status for a number of office, service and maintenance occupations (unionized establishments are defined as those where 50 percent or of more employees are covered by a collective agreement).[1] The survey estimates are seriously biased upwards and therefore, have been a source of confusion and controversy on the precise difference between union density and collective agreement coverage.[2] For example the overall estimate of collective bargaining coverage in October 1984 was 58 percent based on the Labour Canada establishment survey. The union density, the proportion of non-agricultural paid workers who were union members in January 1985, was only 39.0 percent. The 19 percentage point gap between the degree of unionization and collective bargaining coverage appears too large and difficult to explain on institutional grounds, especially in light of the convincing evidence that "eighty-five percent of employees covered by some form of dues check-off scheme are union members" (Adams, 1984, p.660).

The over-estimate of collective bargaining coverage can be attributed to the sample and response bias of the Labour Canada survey. The survey universe

in October 1984 consisted of 31,900 establishments employing 20 or more workers with an estimated workforce of 5.5 million, just over one-half of the total non-agricultural paid employees reported by Statistics Canada's labour force survey. Construction industry, agricultural and fishing industries, and educational institutions were excluded. The total survey response was only 53.3 percent and the response rate varied markedly by industry and size of establishment (Labour Canada, 1985, Appendix D). It was significantly higher for highly unionized industries such as public administration (88.0 percent) and for establishments employing 1,500 or more workers (92.0) than for less unionized sectors like trade (47.8 percent) and services (49.4 percent) and for establishments with less than 100 employees (61.1 percent). The large establishment and highly unionized industry sample response bias, together with the unrepresentative nature of the survey, appears to be the main reason for the over-estimate of overall collective bargaining coverage figures derived from the Labour Canada survey. This finding is also confirmed by a comparison of Labour Canada estimates with the estimates of other establishment surveys which have occasionally collected information on collective agreement coverage. For example, a Statistics Canada survey of employee compensation in Canada for the year 1978 found that 46.8 percent of the employees (37.4 percent of the salaried employees and 61.9 percent of the hourly rated wage earners) in Canada were covered by collective agreements (Statistics Canada, 1981, pp. 98-99) compared with the Labour Canada estimate of 58 percent for that year (38 percent for office workers and 72 percent for non-office employees). The Statistics Canada survey, like the Labour Canada survey, covered establishments with 20 or more employees, used the same criteria for collective bargaining coverage, i.e. establishments where one or

more employees were covered by a collective agreement, and excluded agriculture, fishing and trapping industries.[3] However, unlike the Labour Canada survey, the Statistics Canada survey used a representative stratified sample, had a 90 percent response rate, and kept non-sampling errors to a minimum by "the use of a carefully designed and worded questionnaire, a systematic follow up of non respondents and a thorough edit of data and a rigid control of processing operations" (Statistics Canada, 1981, pp. 31-39). The Construction industry and educational institutions were covered in the Statistics Canada survey but excluded in the Labour Canada survey. The survey revealed that the extent of collective bargaining coverage varied markedly by size of establishment, from 23.5 percent for establishments with less than 100 employees to 66.1 percent for establishments with over 500 workers (Statistics Canada, 1981, Text Table XI, p. 28).

c) Household Surveys: The use of household surveys for generating union membership and collective bargaining coverage data is a relatively recent phenomenon in Canada. The first attempt was the Survey of 1981 Work History (SWH) conducted by Statistics Canada as a supplement to its monthly Labour Force Survey (LFS) in January 1982. The questionnaire included among others a question on union membership, and was administered to two-thirds of the regular LFS sample. SWH was, however, a complex survey (Statistics Canada, November 1983, pp. 110-119). First, the survey only referred to respondents who worked at some time in 1981, the survey's reference year. Second, the survey collected information on each job held by a respondent over the course of the reference year with up to four different employers. "The design of the questionnaire was such that a particular respondent could have reported employment in up to four different industry groups and four different occupation groups. Depending on the class of worker, there may have been work

schedule, union membership and earnings data for any or all of these ... For example, if a person held two paid jobs in 1981, one of which was unionized and the other non-unionized it was difficult to classify the union status of the person" (Statistics Canada, November 1983, p. 111). To alleviate these problems, Statistic Canada created a SWH file in which each paid job was treated as a distinct and independent unit of analysis, as distinguished from more conventional measures of employment. Finally, the survey did not distinguish between union members and those not union members but covered by a collective agreement. The survey simply asked the respondent if he/she "was a member of a union or other group which bargains collectively with this employer?" Thus the survey provided information only on paid jobs in 1981 which were either unionized or non-unionized rather than on the union status of the workers. The survey estimates revealed that 31.2 percent of the "paid jobs" in 1981 were unionized[4], a considerably lower estimate than the 39.0 percent figure for union membership as a percentage of non-agricultural paid workers reported by Labour Canada's union survey in January 1982.

A more refined household survey, the Survey of Union Membership (SUM), was conducted by Statistics Canada in December 1984, again as a supplement to the Labour Force Survey, whose main purpose was "to address issues related to union membership and collective bargaining" (Statistics Canada, December 1985 p. 146)[5]. The survey covered approximately 46,000 households or 100,000 individuals, five-sixths of the LFS sample. The survey asked respondents, who were either employed in December 1984 as a paid worker or if not employed and laid off in the reference week but whose most recent job in 1984 was a paid job, whether (1) he/she was a member of a union or other group which bargained collectively with a employer, and (2) although not a member of a union were

his/her wages covered by a collective agreement negotiated by a union or other group? Respondents were also asked to report their usual wage or salary before deductions. The objective of the question was to collect data on employment income which could be used in conjunction with other information to derive an hourly earnings or wage rate. The SUM was able to generate valuable data on union membership, collective bargaining coverage of union and non-union workers as well as extensive information on union and non-union wage rates for a variety of demographic and labour market groups. Moreover, as the SUM questions on union membership and collective bargaining coverage were identical to the questions asked in the American household survey, the Current Population Survey[6], the survey made it possible to compare accurately the extent of union membership in the two countries.

Encouraged by the success of the past two supplementary surveys, the SWH in January 1982 and the SUM in December 1984, Statistics Canada is now conducting a comprehensive Labour Market Activity Survey, one undertaken in January/February 1987 to collect data for the 1986 reference year and a longitudinal follow up survey planned for January 1988 to obtain data for the 1987 reference year[7]. The survey will include among others the two questions asked in the Survey of Union Membership in December 1984 relating to union membership and collective bargaining coverage.

II. New Estimates of Union Membership and Collective Bargaining Coverage

The 1984 Survey of Union Membership (SUM) conducted by Statistics Canada disclosed that there were a total of nearly 3.87 million union members in December 1984 of whom 3.47 million were employed and approximately 394,000 were laid off from their most recent paid job. Another 526,000 workers, of whom 430,000 were employed and the remaining 96,000 were on lay-off, reported

that while they were not union members their wages were covered by a collective agreement between their employer and a union. Adding the two figures (union membership and non-union workers covered by collective agreements) gives an estimate of 4.39 million workers (both employed and those laid-off) who were covered by collective agreements in 1984. Based on these estimates, the difference between union density and collective bargaining coverage in 1984, the two measures of union activity, was around 5 percentage points; average union density was between 34 and 37 percent (37 percent of those employed in December 1984 and 34 percent of all paid workers including both employed and laid-off) whereas the percent of workers covered by collective agreement was between 39 and 42 percent respectively. Tables 2 to 6 present detailed unpublished estimates of unionism and collective bargaining coverage by age, sex, schooling, full-time, part-time status and by industry, occupation and province, based on the 1984 Statistics Canada Survey, SUM. Table 7 compares estimates of unionism and collective bargaining coverage for the United States and Canada for 1984 based on similar household surveys.

The SUM figures show that unionization rates (and collective bargaining coverage) vary markedly by demographic and related labour market status of workers. For example, 42 percent of all males and 32 percent of all females were unionized in 1984. Union membership was significantly higher among full time workers and prime age (35-54 years) men than among part-time workers, and youth; among the highly educated (with post-secondary degree) and workers with less than 8 years of schooling than among workers with secondary education. By industry, union organization was at or near saturation (with two-thirds or more workers organized) in public administration, quasi-public education and health sectors, communications and utilities, in such manufacturing industries as paper and transportation equipment, and in non-metal mining. Almost one-

Table 2

Union Membership and Collective Agreement Coverage of Employed Paid Workers by Industry in Canada, December 1984
Statistics Canada Survey

Industry	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
Total	3,473.8	5,860.2	430.3	37.2	41.8
Agriculture	2.1	87.3	0.4	2.3	2.8
Forestry	20.6	35.6	2.1	36.7	40.4
Fishing	3.5	3.6	0.1	49.3	50.7
Mining	59.8	122.8	6.8	32.8	36.5
Metal Mining	34.0	27.5	2.3	55.3	59.0
Mineral Fuel	12.0	50.4	2.6	19.2	23.4
Non-Metal Mining	10.9	3.7	0.4	74.7	77.4
Quarries and Sand Pits	2.0	4.5	0.8	31.3	43.8
Services incidental	1.0	36.6	0.6	2.7	4.3
Manufacturing	856.2	1,047.5	76.5	45.0	49.0
Food and Beverage	107.5	119.7	9.3	47.3	51.4
Tobacco	3.7	4.8	2.5	43.0	72.1
Rubber and Plastic	29.8	42.2	2.6	41.4	45.0
Leather	10.7	19.9	0.0	35.0	35.0
Textile	26.6	22.6	1.3	54.1	56.7
Clothing	36.9	78.1	5.5	32.1	36.8
Wood	58.7	53.8	2.1	52.2	54.1
Furniture, etc.	20.5	28.8	1.9	41.6	45.4
Paper and Allied	98.9	36.4	7.0	73.1	78.3
Printing, Publishing	36.0	101.8	8.0	26.1	31.9
Primary Metals	70.4	54.6	2.9	56.3	58.6
Metal Fabricating	55.2	80.3	4.4	40.7	44.0
Machinery Industries	31.1	54.1	4.2	36.5	41.5
Transportation Equip.	137.8	67.1	10.9	67.3	72.6
Electrical	57.0	114.0	5.5	33.3	36.6
Non-Metallic Minerals	23.9	26.5	1.4	47.4	50.2
Petroleum and Coal	4.6	17.2	2.0	21.2	30.4
Chemical	26.8	71.2	2.4	27.5	30.0
Miscellaneous	20.8	54.6	2.7	27.6	31.2
Construction	145.8	229.5	13.1	38.8	42.3
General Contractors	58.0	103.4	5.1	36.0	39.1
Special Contractors	87.3	123.4	7.8	41.4	45.1
Incidental Services	0.6	2.6	0.2	18.8	25.0

Union Membership and Collective Agreement Coverage by Industry (continued)

Industry	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
Transportation, etc.	462.6	308.5	32.6	60.0	64.2
Transportation	217.9	179.1	13.9	54.9	58.4
Storage	4.2	8.4	1.0	33.1	40.9
Communication	166.6	79.5	10.0	67.7	71.7
Utilities	73.9	41.3	7.7	64.1	70.8
Trade	201.3	1,411.4	56.0	12.5	16.0
Wholesale	48.9	667.5	13.8	12.7	16.2
Retail	152.5	1,073.9	42.2	12.4	15.9
Finance, Insurance and Real Estate	47.8	471.1	19.0	9.2	12.9
Finance	16.6	269.0	10.9	6.0	10.0
Insurance Carriers	16.5	98.9	3.9	14.3	17.7
Insurance agencies and Real Estate	14.7	113.2	4.2	11.5	14.8
Services	1,159.3	1,884.4	161.3	38.1	43.4
Noncommercial	1,035.5	629.3	127.2	62.2	69.8
Commercial	123.8	1,255.1	34.1	9.0	11.5
Education and Related	535.1	228.9	63.9	70.0	78.4
Health and Welfare	500.4	400.4	63.3	55.6	62.6
Religious	1.6	64.2	2.4	2.4	6.1
Amusement and Recreation	10.5	71.6	1.8	12.8	15.0
Business Management	22.1	331.9	11.9	6.2	9.6
Personal	10.3	122.1	4.0	7.8	10.8
Accommodation and Food	56.5	510.2	8.4	10.0	11.5
Miscellaneous	22.9	155.0	5.5	12.9	16.0
Public Administration	514.9	258.4	62.5	66.6	74.7
Federal	187.7	88.6	19.5	67.9	75.0
Provincial	174.1	80.4	17.7	68.4	79.3
Local	153.2	88.5	15.1	63.4	69.6

Source: Statistics Canada, unpublished data from the Survey of Union Membership, a supplement to the Labour Force Survey, December 1984.

Table 3

Union Membership and Collective Agreement Coverage of Employed Paid Workers by Occupation in Canada, December 1984
Statistics Canada Survey

Industry	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
Total	3,473.8	5,860.2	430.3	37.2	41.8
Managerial and Related	188.8	824.8	52.4	18.6	23.8
Government Administration	41.6	21.2	3.2	66.2	71.3
Other Managers	83.6	588.7	36.6	12.4	17.9
Related to Management	63.6	214.9	12.6	22.8	27.4
Natural Science, Engineering and Mathematics	116.6	245.5	21.7	32.2	38.2
Physical Sciences	13.5	23.0	3.1	37.0	45.6
Life Sciences	18.4	16.7	1.7	52.4	57.3
Architects	20.7	67.5	5.6	23.5	29.8
Engineers	6.6	15.5	0.3	29.9	31.2
Other Architects/Engineers	31.2	51.8	3.4	37.6	41.7
Mathematics, Statistics and Related	26.2	71.0	7.6	27.0	34.7
Social Science and Related	68.5	79.6	10.0	46.3	53.0
Social Science	10.9	16.6	2.0	39.6	57.3
Social Work	34.0	31.7	4.0	51.8	57.8
Law and Jurisprudence	2.4	22.6	0.7	9.6	12.4
Library, Museum, Archival	12.6	9.9	3.0	56.0	69.3
Other Social Science	8.6	3.8	0.3	69.4	72.4
Religion	0.4	24.7	0.9	1.6	5.2
Teaching and Related	367.3	128.2	36.3	74.1	81.5
University	33.2	32.3	7.5	50.7	62.1
Elementary/Secondary School	268.1	57.7	21.8	82.3	89.0
Other Teaching	66.0	38.2	7.0	63.3	70.1
Medicine and Health	334.2	188.9	38.2	63.9	71.2
Diagnosing and Treating	9.0	15.8	3.1	36.3	48.8
Nursing, Therapy and Related	279.0	101.7	25.2	73.3	79.9
Other Medicine and Health	46.2	71.4	9.9	39.3	47.7
Artistic, Literary, Recreational and Related	30.3	107.4	5.4	22.0	25.9
Fine, Commercial, and Photographic Arts	6.5	31.8	1.2	17.0	20.1
Performing and Audio Visual	6.7	16.6	0.4	28.8	30.5
Writing	11.1	18.8	1.1	37.1	40.7
Sports and Recreation	6.0	40.2	2.7	13.0	18.8

Union Membership and Collective Agreement Coverage by Occupation (continued)

Industry	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
Clerical and Related	545.2	1,262.3	93.4	30.2	35.3
Stenographic and Typing	111.8	311.1	23.4	26.4	32.0
Bookkeeping and Related	91.2	443.4	22.9	17.1	21.4
Office Machine and Electronic Data Processing	26.5	80.2	5.2	24.8	29.7
Material Recording, etc.	77.2	113.1	10.7	40.6	46.2
Library, File, Correspondence	15.9	18.9	3.4	45.7	55.5
Reception, Mail, etc.	88.0	117.1	9.2	42.9	47.4
Other Clerical and Related	134.6	178.5	18.6	43.0	48.9
Sales	64.7	656.1	22.4	9.0	12.1
Commodity Sales	47.4	559.4	20.2	7.8	11.1
Service Sales	7.5	77.8	1.7	8.8	10.8
Other Sales	9.8	18.9	0.5	34.2	35.9
Service	365.5	915.8	46.1	28.5	32.1
Protective Service	93.6	93.8	11.4	50.0	56.0
Food and Beverage Service	79.7	379.8	13.2	17.3	20.2
Lodging and Accomodation	26.9	29.4	1.4	47.8	50.4
Personal Service	25.6	134.9	5.6	16.0	19.4
Apparel and Furnishing	17.1	24.3	2.1	41.3	46.4
Other Services	122.6	253.6	12.4	32.6	35.9
Farming, Horticulture, etc.	9.0	76.3	0.6	10.6	11.2
Farmers	0.0	5.0	0.0	0.0	0.0
Other Farming and Related	9.0	71.3	0.6	11.2	11.9
Fishing, Trapping and Related	2.5	3.4	0.0	42.4	42.4
Forestry and Logging	20.6	28.7	1.9	41.8	45.6
Mining, Quarrying, Oil and Gas	24.7	35.0	1.6	41.4	44.1
Processing Occupations	215.4	154.3	13.2	58.3	61.8
Mineral Ore Treating	2.8	0.2	0.0	93.3	93.3
Metal	40.4	22.9	1.1	63.8	65.6
Clay, Glass, and Stone	7.7	5.3	0.0	59.2	59.2
Chemicals, Petroleum, Rubber Plastic and Related	16.0	21.4	2.5	42.8	49.3
Food, Beverage and Related	70.1	70.7	6.0	49.8	54.0
Wood	7.2	5.0	0.0	59.0	59.0
Pulp and Papermaking	34.9	5.2	1.3	87.0	90.3
Textile	15.9	9.8	0.5	61.9	63.8
Other Processing	0.8	3.6	0.6	18.2	31.8

Union Membership and Collective Agreement Coverage by Occupation (continued)

Industry	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
Machining and Related	124.0	98.0	6.3	55.9	58.7
Metal Machining	38.9	28.0	1.1	58.2	59.8
Metal Shaping and Forming	70.9	55.6	4.4	56.1	59.5
Wood Machining	6.5	3.2	0.5	67.0	72.2
Clay, Glass, Stone Machining	4.8	3.9	0.0	55.2	55.2
Other Occupations	2.9	7.3	0.3	28.4	31.4
Product Fabricating, Assembling and Repairing	398.5	468.1	32.8	46.0	49.8
Metal Fabricating/Assembling	71.2	39.5	5.8	64.3	69.6
Electrical and Electronic	79.1	70.1	4.6	53.0	56.1
Wood Products	9.2	25.8	1.5	26.3	30.6
Textile, Fur and Leather	42.1	81.6	4.9	34.0	38.0
Rubber, Plastic and Related	16.8	17.5	0.8	49.0	51.2
Mechanics and Repairers	142.9	190.6	13.6	42.9	46.9
Other	37.2	43.0	1.6	46.4	48.4
Construction Trades	254.0	192.2	17.2	56.9	60.8
Excavating, Grading, Paving	41.8	24.1	2.4	63.4	67.1
Power, Lighting and Wire	63.0	26.0	4.4	70.8	75.7
Other (eg. Carpenters)	149.2	142.1	10.4	51.2	54.8
Transport Equipment Operators	154.5	186.4	13.8	45.3	49.4
Air	7.5	4.3	0.3	63.6	65.6
Railway	20.7	4.3	1.2	82.8	88.0
Water	9.2	4.4	1.0	67.7	74.5
Motor	113.9	170.5	10.5	40.1	43.7
Other	3.2	2.9	0.8	52.5	65.6
Materials Handling and Related	116.8	121.5	7.2	49.0	52.0
Other Crafts and Equipment Operating Occupations	72.4	63.1	9.5	53.4	60.4
Printing and Related	24.8	40.0	5.9	38.3	47.3
Stationary Engine and Utilities	41.1	19.3	2.9	68.1	72.9
Electronic and Communication	5.2	1.0	0.5	83.9	91.9
Other	1.3	2.8	2.6	31.7	36.6

Source: Statistics Canada, unpublished data from the Survey of Union Membership, a supplement to the Labour Force Survey, December 1984.

Table 4

Union Membership and Collective Agreement Coverage of Employed Paid Workers by Sex and Age in Canada, December 1984
Statistics Canada Survey

	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
Both Sexes	3,473.8	5,860.2	430.3	37.2	41.8
15-16 years	4.8	146.2	2.1	3.2	4.5
17-19 years	51.2	497.3	17.4	9.3	12.5
20-24 years	344.4	1,105.1	74.6	23.8	28.9
25-34 years	1,130.7	1,717.3	132.6	39.7	44.4
35-44 years	982.7	1,151.2	97.7	46.1	50.6
45-54 years	607.1	760.2	65.4	44.4	49.2
55-64 years	343.6	425.7	36.4	44.7	49.4
65-69 years	6.5	33.5	4.1	16.3	26.5
70 years and over	2.9	23.8	0.1	10.9	11.1
Males	2,137.6	3,010.5	232.6	41.5	46.0
15-16 years	4.2	78.2	1.5	5.1	7.0
17-19 years	31.2	242.9	6.9	11.4	13.9
20-24 years	203.8	535.5	33.3	27.6	32.1
25-34 years	660.1	903.3	70.8	42.2	46.8
35-44 years	601.6	585.5	54.7	50.7	55.3
45-54 years	395.8	388.6	38.8	50.5	55.4
55-64 years	234.6	239.3	24.5	49.5	54.7
65-69 years	4.0	20.1	2.2	16.6	25.7
70 years and over	2.3	17.4	0.1	11.7	12.1
Females	1,336.2	2,849.7	197.7	31.9	36.6
15-16 years	0.6	68.0	0.5	0.9	1.6
17-19 years	20.0	254.4	10.6	7.3	11.1
20-24 years	140.6	569.6	41.3	19.8	25.6
25-34 years	470.6	814.1	61.9	36.6	41.5
35-44 years	381.1	565.7	43.0	40.3	44.8
45-54 years	211.3	371.7	26.7	36.2	40.8
55-64 years	109.0	186.3	11.9	36.9	40.9
65-69 years	2.5	13.5	1.9	15.6	27.8
70 years and over	0.6	6.4	0.0	8.6	8.5

Source: Statistics Canada, unpublished data from the Survey of Union Membership, a supplement to the Labour Force Survey, December 1984.

Table 5

Union Membership and Collective Bargaining Coverage of Employed Paid Workers by Province, Employment Status and Sex in Canada, December 1984
Statistics Canada Survey

Province, Employment, Status and Sex	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
CANADA					
All Workers	3,473.8	5,860.2	430.3	37.2	41.8
Males	2,137.6	3,010.5	232.6	41.5	46.0
Females	1,336.2	2,849.7	197.7	31.9	36.6
Full-Time	3,185.1	4,610.6	359.6	40.9	45.5
Males	2,076.7	2,624.4	216.6	44.2	48.8
Females	1,108.4	1,986.2	143.1	35.8	40.4
Part-Time	288.7	1,249.7	70.7	18.8	23.4
Males	60.8	386.2	16.1	13.6	17.2
Females	227.9	863.5	54.6	20.9	25.9
NEWFOUNDLAND					
All Workers	60.5	79.6	4.4	43.2	46.3
Males	38.4	44.2	2.7	46.5	49.8
Females	22.0	35.4	1.7	38.3	41.3
Full-Time	56.4	66.3	4.0	46.0	49.2
Males	37.6	39.8	2.6	48.6	51.9
Females	18.8	26.6	1.5	41.4	44.7
Part-Time	4.0	13.3	0.4	23.1	25.6
Males	0.9	4.5	0.1	16.7	18.6
Females	3.2	8.8	0.3	26.7	28.6
PRINCE EDWARD ISLAND					
All Workers	11.4	25.1	1.4	31.2	35.2
Males	5.9	12.7	0.9	31.7	36.8
Females	5.5	12.4	0.5	30.7	33.7
Full-Time	10.3	19.2	1.2	34.9	39.0
Males	5.9	10.6	0.8	35.8	40.6
Females	4.5	8.6	0.4	34.4	37.1
Part-Time	1.1	5.8	0.3	15.9	19.1
Males	0.1	2.1	0.1	4.6	6.6
Females	1.0	3.8	0.2	20.8	24.6

Union Membership and Collective Bargaining Coverage of Employed Paid Workers by Province, Employment Status and Sex (continued)

Province, Employment, Status and Sex	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
NOVA SCOTIA					
All Workers	108.2	176.2	12.7	38.1	42.5
Males	67.0	91.1	6.8	42.4	46.7
Females	41.2	85.1	5.9	32.6	37.3
Full-Time	100.3	135.9	9.9	42.5	46.7
Males	65.0	78.9	6.2	45.2	49.5
Females	35.3	57.0	3.7	38.2	42.3
Part-Time	7.9	40.3	2.8	16.4	22.1
Males	2.0	12.2	0.6	14.1	18.0
Females	5.9	28.1	2.2	17.4	23.8
NEW BRUNSWICK					
All Workers	76.5	128.2	7.2	37.4	40.9
Males	49.1	66.2	3.3	42.6	45.4
Females	27.5	62.0	3.9	30.7	35.0
Full-Time	71.7	102.6	6.3	41.1	44.8
Males	48.3	58.4	3.0	45.3	48.0
Females	23.5	44.2	3.3	34.7	39.6
Part-Time	4.8	25.6	0.9	15.8	18.8
Males	0.8	7.8	0.3	9.3	13.3
Females	4.0	17.9	0.6	18.3	21.0
QUEBEC					
All Workers	1,012.3	1,323.1	149.4	43.4	49.7
Males	630.9	702.8	83.2	47.3	53.5
Females	381.4	620.4	66.2	38.1	44.7
Full-Time	925.5	1,079.2	131.2	46.2	52.7
Males	611.5	623.6	77.7	49.5	55.8
Females	313.9	455.7	53.5	40.8	47.7
Part-Time	86.8	243.9	18.3	26.3	31.8
Males	19.4	79.2	5.5	19.7	25.2
Females	67.5	164.7	12.8	29.1	34.6

Union Membership and Collective Bargaining Coverage of Employed Paid Workers by Province, Employment Status and Sex (continued)

Province, Employment, Status and Sex	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
ONTARIO					
All Workers	1,252.6	2,464.3	144.6	33.7	37.6
Males	791.3	1,237.2	76.9	39.0	42.8
Females	461.3	1,227.1	67.8	27.3	31.3
Full-Time	1,156.2	1,922.8	115.4	37.6	41.3
Males	770.9	1,069.6	70.1	41.9	45.7
Females	385.3	853.2	45.2	31.1	34.8
Part-Time	96.4	541.6	29.3	15.1	19.7
Males	20.4	167.6	6.7	10.9	14.4
Females	76.0	374.0	22.5	16.9	21.9
MANITOBA					
All Workers	146.6	244.2	17.2	37.5	41.9
Males	83.9	122.9	9.0	40.6	44.9
Females	62.6	121.3	8.2	34.0	38.5
Full-Time	131.3	186.1	14.9	41.4	46.0
Males	80.6	106.3	8.7	43.1	47.8
Females	50.7	79.9	6.2	38.8	43.6
Part-Time	15.3	58.1	2.4	20.8	24.1
Males	3.3	16.6	0.3	16.6	18.2
Females	12.0	41.5	2.1	22.4	26.3
SASKATCHEWAN					
All Workers	116.0	195.0	14.4	37.3	41.9
Males	59.6	99.4	7.6	37.5	42.3
Females	56.4	95.6	6.8	37.1	41.6
Full-Time	103.5	145.0	11.4	41.7	46.2
Males	57.8	84.2	7.1	40.7	45.7
Females	45.7	60.8	4.3	42.9	47.0
Part-Time	12.5	50.0	3.0	20.0	24.8
Males	1.8	15.2	0.6	10.6	14.0
Females	10.7	34.8	2.4	23.5	28.9

Union Membership and Collective Bargaining Coverage of Employed Paid Workers by Province, Employment Status and Sex (continued)

Province, Employment, Status and Sex	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
ALBERTA					
All Workers	260.5	653.9	44.5	28.5	33.4
Males	139.5	350.2	21.5	28.5	32.9
Females	120.9	303.6	23.0	28.5	33.9
Full-Time	237.9	528.0	38.1	31.1	36.0
Males	135.5	313.9	21.2	30.2	34.9
Females	102.3	214.1	16.9	32.3	37.7
Part-Time	22.6	125.8	6.4	15.2	19.6
Males	4.0	36.3	0.3	9.9	10.6
Females	18.6	89.5	6.1	17.2	22.9
BRITISH COLUMBIA					
All Workers	429.3	570.7	34.4	42.9	46.4
Males	272.0	283.9	20.7	48.9	52.7
Females	157.4	286.8	13.6	35.4	38.5
Full-Time	392.0	425.5	27.4	48.0	51.3
Males	263.7	239.2	19.2	52.4	56.3
Females	128.4	186.3	8.2	40.8	43.4
Part-Time	37.3	145.2	7.0	20.4	24.3
Males	8.3	44.7	1.5	15.7	18.6
Females	29.0	100.5	5.5	22.4	26.6

Source: Statistics Canada, unpublished data from the Survey of Union Membership, a Supplement to the Labour Force Survey, December 1984.

Table 6

Union Membership and Collective Agreement Coverage of Employed Paid Workers by Education and Province in Canada, December 1984
Statistics Canada Survey

Education and Province	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
Total	3,473.8	5,860.2	430.3	37.2	41.8
0 - 8 YEARS					
Canada	430.3	510.5	33.4	45.7	49.3
Newfoundland	7.2	9.7	0.1	42.6	43.1
Prince Edward Island	1.0	2.3	0.8	30.3	33.5
Nova Scotia	12.8	18.7	0.7	40.6	42.8
New Brunswick	12.6	15.8	0.5	44.4	46.1
Quebec	177.3	171.1	17.3	50.9	55.9
Ontario	162.3	210.1	10.5	43.6	46.4
Manitoba	10.2	19.2	1.4	34.7	39.6
Saskatchewan	8.5	6.7	1.0	55.9	37.6
Alberta	12.3	28.0	1.1	30.5	33.4
British Columbia	26.2	18.9	0.3	58.1	58.8
SOME SECONDARY/NO POST-SECONDARY					
Canada	1,597.0	3,089.3	188.4	34.1	38.2
Newfoundland	17.3	37.6	1.6	31.5	34.5
Prince Edward Island	4.6	14.3	0.3	24.3	26.0
Nova Scotia	48.4	95.0	5.9	33.8	37.8
New Brunswick	29.7	70.5	2.9	29.6	32.5
Quebec	458.3	655.3	70.0	41.2	47.4
Ontario	581.8	1,274.9	62.2	31.3	34.7
Manitoba	70.1	138.6	6.9	33.6	36.9
Saskatchewan	46.9	111.2	4.3	29.7	32.4
Alberta	105.4	364.6	12.6	22.4	25.1
British Columbia	234.5	327.3	14.8	41.7	44.4
SOME POST-SECONDARY					
Canada	291.9	674.1	47.6	30.2	35.1
Newfoundland	5.5	10.4	1.0	34.6	40.7
Prince Edward Island	0.7	3.1	0.1	18.4	21.6
Nova Scotia	6.2	17.5	1.4	26.2	32.0
New Brunswick	7.0	14.0	1.1	33.3	38.7
Quebec	65.1	131.9	10.7	33.1	38.5
Ontario	108.9	284.9	17.6	27.7	32.1
Manitoba	14.2	30.8	2.7	31.6	37.5
Saskatchewan	13.1	21.7	1.3	37.6	41.3
Alberta	23.8	71.1	2.6	25.1	27.8
British Columbia	47.6	88.9	6.0	34.9	39.3

Union Membership and Collective Agreement Coverage by Education and Province (continued)

Education and Province	Actual Number ('000)			Percentage	
		Non-Union			
	Union Members	Total	Covered by Coll. Agree.	Union-ized	Covered by Coll. Agree.
POST-SECONDARY GRADUATE					
Canada	588.5	824.7	77.8	41.6	47.2
Newfoundland	18.1	14.1	0.9	56.2	58.9
Prince Edward Island	2.0	3.3	0.3	37.7	43.2
Nova Scotia	19.8	24.6	2.8	44.6	50.8
New Brunswick	14.2	14.4	1.3	49.7	54.2
Quebec	169.7	214.7	26.4	44.2	51.0
Ontario	192.6	339.9	25.0	36.2	40.9
Manitoba	23.7	24.4	2.0	49.3	53.4
Saskatchewan	26.2	25.7	1.8	50.5	53.9
Alberta	64.0	101.5	8.5	38.7	43.8
British Columbia	58.3	62.1	4.6	48.4	52.2
UNIVERSITY DEGREE					
Canada	566.0	761.6	83.0	42.6	48.9
Newfoundland	12.5	7.8	0.8	61.6	65.3
Prince Edward Island	3.1	2.1	0.7	59.6	72.2
Nova Scotia	21.0	20.5	2.0	50.6	55.5
New Brunswick	13.0	13.6	1.5	48.9	54.4
Quebec	141.8	150.2	25.1	48.6	57.2
Ontario	207.0	354.4	29.3	36.9	42.1
Manitoba	28.3	31.2	4.2	47.6	54.6
Saskatchewan	21.4	19.7	1.7	52.1	56.4
Alberta	55.0	88.8	6.3	38.3	42.7
British Columbia	62.8	73.4	8.6	46.1	52.5

Source: Statistics Canada, unpublished data from the Survey of Union Membership, a supplement to the Labour Force Survey, December 1984.

Table 7

Union Membership and Collective Agreement Coverage of Employed Paid Workers by Age, Sex, Employment Status, Occupation and Industry in Canada and the United States, 1984
Percent of Employed Workers

	Unionized		Covered by Collective Agreement	
	Canada	U.S.	Canada	U.S.
Both Sexes	37.2	18.8	41.8	21.6
16-24	18.6	7.9	23.0	9.5
25-34	39.7	18.2	44.4	21.3
35-44	46.1	23.9	50.6	27.4
45-54	44.4	25.5	49.2	28.8
55-64	44.7	25.0	49.4	27.8
65 and over	14.1	9.8	20.4	11.3
Males	41.5	23.0	46.0	25.7
16-24	21.8	9.9	25.6	11.6
25-34	42.2	21.8	46.8	24.5
35-44	50.7	29.3	55.3	32.5
45-54	50.5	31.1	55.4	34.3
55-64	49.5	30.2	54.7	32.7
65 and over	14.4	11.0	19.6	12.6
Females	31.9	13.8	36.6	16.8
16-24	15.3	5.8	20.3	7.3
25-34	36.6	13.7	41.5	17.2
35-44	40.3	17.5	44.8	21.3
45-54	36.2	18.5	40.8	22.0
55-64	36.9	18.6	40.9	21.7
65 and over	13.5	8.6	21.7	9.9
Full-Time Employment	40.9	21.5	45.5	24.5
Part-Time Employment	18.8	7.3	23.4	9.0
By Occupation				
Managerial, Professional, Technical	40.9	15.2	47.0	19.6
Clerical	30.2	14.0	35.3	17.4
Sales	9.0	6.3	12.1	7.4
Service	28.5	15.1	32.1	17.2
Primary, except Mining	22.8	5.5	24.6	6.4
Processing, Machining, Labourers	51.6	32.3	54.2	34.6
Transportation and Moving	45.3	34.7	49.4	37.0
Materials Handling	49.0	27.4	52.0	29.4
By Industry				
Agriculture	2.3	2.6	2.8	3.3
Mining	32.8	17.7	36.5	19.8
Construction	38.8	23.5	42.3	24.8
Manufacturing	45.0	26.0	49.0	28.4
Durable	48.7	27.5	52.2	30.0
Non-Durable	41.4	23.8	45.9	25.8
Transportation	54.9	37.3	58.4	39.4
Communications & Public Utilities	66.6	40.3	71.5	45.4
Wholesale Trade	12.7	8.6	16.2	9.5
Retail Trade	12.4	7.8	15.9	8.7
Finance, Insurance & Real Estate	9.2	2.7	12.9	4.0
Services	38.1	7.3	43.4	8.8
Government	66.6	35.8	74.7	43.9

Source: Statistics Canada, unpublished data from the Survey of Union Membership, a supplement to the Labour Force Survey, and U.S. Bureau of Labor Statistics, Employment and Earnings, January 1985.

half of the workers were unionized in fishing, metal mining, food and beverage, textile, wood products, primary metals, non-metallic mineral products and in transportation. By occupation, the proportion of workers unionized was two-thirds or more among teachers, nurses, government administrators, and in most blue-collar processing, machine assembling and trades occupations; and between two-fifths and one-half among professionals in life sciences, social sciences (except in law and jurisprudence), medicine and health, in such clerical occupations as file clerks and receptionists, among protective service and hotel workers, and in most fishing, forestry and mining occupations. By province, British Columbia, Quebec and Newfoundland had the highest rate of unionization; Alberta was the least unionized, while in other provinces unionization was close to or slightly less than the national average.

A comparison of union density and collective bargaining coverage estimates by gender, age, schooling, industry, occupation and province also revealed that in an overwhelming majority of cases the difference between the two measures of unionization was less than 10 percent; in only two occupations was collective bargaining coverage between 12 - 14 percentage points higher and in one industry (tobacco) the coverage was nearly 29 percentage points higher than the unionization rate.

III. A Comparison of Alternate Estimates

Table 8 presents comparable estimates of union membership, union density and collective bargaining coverage for 1984 from alternate sources for the total economy and by gender, province and industry. Figures indicate that while union membership and union density figures from the new Statistics Canada household survey, SUM, and the CALURA and Labour Canada surveys are

Table 8

A Comparison of Alternate Estimates of Unionism
and Collective Agreement Coverage for Canada for the year 1984

	Union Members in '000		Union Density[1]		Percent of employees covered by Collective Agreements	
	Statistics Canada Survey	CALURA	Statistics Canada Survey	CALURA	Statistics Canada Survey	Labour Canada Survey
1 Overall Estimate[2]	3,867.3	3,438.7	41.4	35.1	46.5	58.0
	(3,473.8)	(3,379.8)	37.2	34.5	41.8	-
Men	2,398.3	2,219.6	46.6	40.1	51.6	-
	(2,137.6)	(2,169.4)	41.5	39.2	46.0	-
Women	1,469.0	1,219.1	35.1	28.6	40.2	-
	(1,336.2)	(1,210.4)	31.9	28.4	36.6	-
By Province						
Newfoundland	60.5	81.2	43.2	56.4	46.3	68.0
New Brunswick	76.5	82.8	37.4	39.2	40.9	65.0
Nova Scotia	108.2	97.8	38.1	33.7	42.5	59.0
P.E.I.	11.4	10.7	31.2	28.9	35.2	73.0
Quebec	1,012.3	946.2	43.4	39.1	49.7	64.0
Ontario	1,252.6	1,244.7	33.7	32.4	37.6	51.0
Manitoba	146.6	138.2	37.5	35.2	41.9	63.0
Saskatchewan	116.0	108.8	37.3	34.7	41.9	71.0
Alberta	260.5	263.5	28.5	27.6	33.4	53.0
B.C.	429.3	457.0	42.9	42.9	46.4	70.0
By Industry						
Agriculture	2.1	1.4	2.3	1.1	2.8	-
Fishing & Trapping	20.6	25.9	36.7	42.5	40.4	-
Forestry	3.5	3.2	49.3	40.2	50.7	74.0
Mining	59.8	47.8	32.8	26.4	36.5	53.0
Manufacturing	856.2	749.5	45.0	39.1	49.0	58.0
Construction	145.8	211.4	38.8	47.5	42.3	-
Transportation etc.	462.6	455.0	60.0	56.4	64.2	76.0
Trade	201.3	174.5	12.5	9.8	16.0	30.0
Finance	47.8	16.0	9.2	2.7	12.9	3.0
Services	1,159.3	1,151.4	38.1	36.9	43.4	56.0
Public Administration	514.9	543.6	66.6	72.4	74.7	86.0

1 Union membership as a percent of paid workers.
2 Figures in parentheses exclude unemployed, workers on layoff from their most recent job, pensioners, etc.

Source: For CALURA data: Statistics Canada, Corporations and Labour Unions Returns Act, 1984, Part II and Statistics Canada, The Labour Force, 71-001, December 1984. Provincial figures include unemployed, pensioners, etc.
For Statistics Canada Survey: unpublished data from the December 1984 supplementary labour force survey on "union membership".
For Labour Canada Survey: unpublished data from the 1984 survey of Wages and Working Conditions in Canada.

roughly comparable, there is a great divergence between SUM and Labour Canada estimates of collective bargaining coverage. The overall SUM estimate of union membership is nearly 11 percent higher than the CALURA estimate and only 5 percent more than the estimate derived from the Labour Canada annual survey of labour organizations. The divergence between SUM and the CALURA estimate is only 3 percent when only employed union members are compared. It appears that the discrepancy between the two estimates can be largely attributed to a considerably higher figure of unemployed and laid off union workers in the household survey, and the problems of generating population estimates from a small sample in some provinces and industries[8]. Thus although the CALURA and SUM estimates of union membership for most catagories vary between zero and 10 percent, the divergence is significant in estimates of women members (both employed and unemployed) and of union membership in Newfoundland, in agricultural, fishing, mining, construction and finance. A comparison of CALURA and Labour Canada estimates based on the survey of unions also suggests that the CALURA survey generally underestimates union membership because of its exclusion of unions with less than 100 members and incomplete response from professional and related national unions and associations. Union density figures from the CALURA survey and the SUM also diverge on account of problems of small sample for some provinces and industries and the slight difference in estimates of paid workers to calculate the percent of union organization[9]. In general, however the percentage point difference between the two estimates is less than five. The divergence is significantly higher when unemployed and laidoff workers are included in total union membership[10]. There are also wide variations in estimates for Newfoundland, and for agriculture, fishing, forestry, mining and construction industries.

The new estimates of collective bargaining coverage from the SUM also differ markedly from the Labour Canada estimates based on a survey of establishments. In aggregate, as well as for individual provinces and industries Labour Canada estimates are significantly higher than the SUM estimates. The differences primarily relate to the poor sample design of the Labour Canada survey, in particular the survey sample and response bias towards large establishments and sectors with a high degree of unionization.

Conclusion

The new estimates from the recent Statistics Canada's supplementary household survey, the survey of union membership in December 1984, are a welcome addition to the alternate estimates of unionism and collective bargaining coverage. The diverse range of cross-classified information generated from the survey will be extremely useful for both researchers and union organizers. The estimates will hopefully put to rest the controversy over the size of the differential between the percent of workers who are union members and the percent of employees covered by collective agreements. As well the data should be valuable for studies of economic effects of unionism, and help unions assess more effectively the potential areas of future organization.

Notes

1 The annual survey of wages and working conditions in Canada was discontinued by Labour Canada in 1986. The last survey was conducted in October 1985.

2 See for example Adams (1984) and Riddell (1986) Riddell study, prepared for the Royal Commission on the Economic Union and Development Prospects for Canada (commonly referred to as the Macdonald Commission) commented that "Data on both collective bargaining coverage and union membership have important flaws" (fn.2, p.83).

3 Employers with 100 or more workers provided separate data for salaried employees and wage earners. All hospitals and employers with less than 100 employees provided data for all employees as a single group. Salaried employees in the Survey included executives, managers, professionals including teachers and academic staff, and technical, clerical and supervisory employees above the level of working foreman. Wage-earners included working foremen, production workers, retail sales clerks, drivers, shipping, warehousing, delivery, maintenance and construction workers. Except for some minor differences these definitions are similar to those used in Labour Canada Survey of wages and working conditions.

4 The survey showed that the incidence of unionization was considerably higher among men (35.9 percent) than women (25.0 percent), in full time jobs (35.2 percent) compared to part-time jobs (15.0 percent). The Survey found little difference between the sexes in the proportion of part-time jobs that were unionized. However 38.9 percent of full time jobs held by men were unionized compared to 29.2 percent for women. Another interesting finding of the Survey was that women in unionized jobs were typically more educated than men. A sizable minority of women in unionized jobs (42.2 percent of the total) were those in managerial and professional occupations. The proportion of unionized men in these occupation as a comparison was less than (17.7 percent) half that of women (for details see Statistics Canada, November 1983, p. 83-119).

5 The Survey of union membership was jointly sponsored by Labour Canada and Statistics Canada, and was designed primarily to provide answers to the following questions: (i) how many paid workers have their wages and other conditions of work determined by a collective agreement; (ii) among those employees who are covered by collective agreements, how many are actually union members; (iii) what are the characteristics of union members, for example which industries and provinces are the most highly unionized; and (iv) do the wages and pension plan coverage of union members and non-union workers differ significantly?

6 The Current Population Survey (CPS) is a monthly survey of about 60,000 households in the United States which provides basic information on the nation's labour force, similar to the monthly Labour Force Survey in Canada. Beginning in January 1983, two special questions focusing on

union membership and collective bargaining coverage were added to the questionnaire used in the Survey. The Survey questions relating to unions are the last in a sequence focusing on the nature of the job held by employed persons, the hours worked and the hourly and weekly earnings. After providing this information the Survey respondent is asked whether on this job the worker in question "is a member of a labour union or of an employee association". If the answer is "no" a further question is asked whether the worker is "covered by a union or employee association contract" (for details on the concepts and data see Employment and Earnings January 1985, and Larry Adams (1985)).

7 The Labour Market Activity Survey (LMAS) is being conducted by Statistics Canada with the cooperation and support of Employment and Immigration Canada. The objectives of the Survey are: (a) "to provide dynamic measures of the Canadian labour market over a 24-month period which are conceptually consistent with the Labour Force Survey"; and (b) to provide information on the characteristics of paid jobs held which are not available from the Labour Force Survey (LFS). The Survey, "administered as two separate but identical surveys", is being conducted as a supplement to the January 1987 and the February 1987 cycles of the LFS with a longitudinal follow-up planned for January 1988. Among others, the Survey will provide estimates relating to the characteristics of paid jobs in terms of unionization, usual wage rates and hours, coverage under collective agreements and pension plans. The LMAS will also permit calculation of union density from several novel points of view such as the proportion of persons who held at least one unionized job in the reference year, the proportion of paid jobs which are unionized, and the proportion of paid person hours of employment which are unionized.

8 The coefficient of variation of the estimates, the standard error of the estimate divided by the estimate is inversely related to the size of the estimate. The crude sampling variability tables for aggregate paid worker estimates of the Survey of Union Membership show that the coefficient of variation is less than 16.5 percent for estimates greater than 13,000 for Canada; 4,000 for Newfoundland, Prince Edward Island and New Brunswick; 5,500 for Nova Scotia; 20,000 and 24,000 for Quebec and Ontario respectively; 7,000 for Manitoba, 5,000 for Saskatchewan, 10,000 for Alberta and 15,500 for British Columbia. Under Statistics Canada Guidelines, the estimates below 4,000 or estimates with a coefficient of variation of over 25 percent are not "reliable" and may not be released. The unweighted univariate counts from the Survey showed that estimates for Prince Edward Island, Newfoundland, for age groups 15-19 and 65-69, for workers with a job tenure of over 20 years, and for a number of two-digit SIC industries and three-digit CCDO occupations were too low to provide very reliable estimates.

9 The LFS estimate of paid workers for December 1984 used to calculate the union density with CALURA union membership figures, was about 455 thousand more than the paid worker estimate from the SUM. The difference was accounted for by multiple job holders and working owners of incorporated businesses treated as paid workers in the LFS estimates but

excluded from the SUM. Both the SWH and the SUM, as well as the new Labour Market Activity Survey (LMAS) use a slightly different definition of paid worker than the LFS. Specifically, they do not count owners of incorporated businesses as paid workers, whereas the LFS does.

10 The CALURA estimate of unemployed and retired union members in 1984 was 58,862 compared to 394,000 in the SUM.

References

1 Adams, Roy J. (1984), "The Extent of Collective Bargaining In Canada", Relations Industrielles, Volume 39 No. 4.

2 Riddell, Craig W. (1986), Canadian Labour Relations, Toronto: University of Toronto Press (Volume 16 of the research studies of the Royal Commission on the Economic Union and Development Prospects for Canada).

3 Statistics Canada (1987), Corporations and Labour Unions Returns Act Report for 1984, Part II - Labour Unions, Ottawa: Supply and Services Canada.

4 Labour Canada (annual), Directory of Labour Organizations In Canada Ottawa: Supply and Services Canada.

5 Statistics Canada (November 1983), The Labour Force, monthly, Ottawa: Supply and Services Canada.

6 Statistics Canada (December 1985). The Labour Force, monthly, Ottawa: Supply and Services Canada.

7 _____ (1981) Employee Compensation In Canada: All Industries, 1978. Ottawa: Supply and Services Canada.

8 Labour Canada (1985), Wages and Working Conditions In Canada Ottawa: Supply and Services Canada.

9 Bureau of Labor Statistics, U.S. Department of Labor (January, 1985), Employment and Earnings, Volume 32, No. 1 Washington, D.C.: U.S. Government Printing Office.

10 Adams, Larry T. (February 1985), "Changing Employment Patterns of Organized Workers", Monthly Labor Review, Vol.108, No.2.

Appendix

Confidence Intervals at 95 Percent Level for Estimates of Unionization from the SUM

Confidence intervals for estimates of unionization presented in this Appendix were derived from the crude estimates of the coefficient of variation (CV), prepared by Statistics Canada based on the numerator of a ratio (in this case the employed paid union workers) and the ratio itself (i.e. the percent of workers unionized in the sample). In order to establish a confidence interval, the relevant Statistics Canada CV, which incorporated a design factor, was found and was then multiplied by the estimated unionization ratio to get the standard error of the estimate. The standard error was then used to calculate the upper and lower limits of a 95 percent confidence interval ($z.025 = 1.96$ where z is the normal deviate) about the mean (estimated unionization ratio). The confidence interval therefore can be represented by the formula, $R \pm 1.96 \times CV(R) \times R$, where R is the estimated unionization ratio and CV(R) is the coefficient of variation of the R.

If p is the proportion of observed sample unionized, and π is the proportion of the population unionized, then it is assumed that the estimates of p are normally distributed with an expected value of π and a variance of $B[\pi(1-\pi)/n]$ for a sufficiently large sample, where B is the design factor. For more details of survey method and design, and for crude sampling variability tables see Survey of Union Membership Micro Data Documentation (Statistics Canada, Household Surveys Division, September 1985).

Table A-1

Estimates of Unionism Confidence Intervals at the 95 Percent Level

	Number of Sample Observations	Estimate of Percent Unionized	Confidence Interval Lower Limit	Confidence Interval Upper Limit
Canada	33,795	37.2	36.5	37.9
Province				
Newfoundland	1,496	43.2	40.5	45.9
Prince Edward Island	752	31.3	27.4	35.2
Nova Scotia	2,337	38.0	35.6	40.4
New Brunswick	2,301	37.4	35.0	39.8
Quebec	5,737	43.3	41.7	44.9
Ontario	7,756	33.7	32.3	35.1
Manitoba	2,821	37.5	35.4	39.6
Saskatchewan	2,959	37.3	35.1	39.5
Alberta	4,522	28.5	26.8	30.2
British Columbia	3,114	42.9	40.8	45.0
Sex				
Males	18,181	41.5	40.7	42.2
Females	15,614	31.9	31.1	32.7
Marital Status				
Married	22,336	42.0	41.3	42.7
Single	9,120	24.9	23.9	25.9
Other	2,339	40.7	38.4	43.0
Age				
15-16	600	3.2	1.3	5.1
17-19	2,150	9.3	7.8	10.8
20-24	5,205	23.8	22.4	25.2
25-34	10,442	39.7	38.6	40.8
35-44	7,626	46.1	44.7	47.5
45-54	4,794	44.4	42.7	46.1
55-64	2,735	44.7	42.6	46.8
65-69	156	16.3	9.2	23.2
Education				
None or Elementary	3,679	45.7	43.7	47.7
High School	17,551	34.1	33.3	34.9
Some Post-Secondary	3,265	30.2	28.5	31.9
Post-Secondary	5,070	41.6	40.0	43.2
University	4,230	42.6	40.9	44.3
Type of Job				
Full-time	27,952	40.9	40.3	41.5
Part-time	5,843	18.8	17.7	19.9

Estimates of Unionism Confidence Intervals at 95 Percent Level.(continued)

	Number of Sample Observations	Estimate of Percent Unionized	Confidence Interval Lower Limit	Confidence Interval Upper Limit
Tenure				
1-6 months	6,281	17.9	16.8	19.0
7-12 months	2,912	20.3	18.5	22.1
1-5 years	10,000	29.9	28.8	31.0
6-10 years	6,339	46.5	45.1	47.9
11-20 years	5,955	58.4	56.9	59.9
20+ years	2,308	55.6	53.3	57.9
OCCUPATION				
Managerial and Related	3,379	18.6	17.2	20.0
Government Admin.	253	66.3	59.5	73.1
Other Managers	2,241	12.4	10.9	13.9
Related to Management	885	22.8	21.3	24.3
Natural Science, Engineering and Mathematics	1,075	32.2	29.4	35.0
Physical, Life Science	241	44.5	37.1	51.9
Maths, Stats, Systems Analysis and Related	253	27.0	21.5	32.5
Architects and Engineers	303	24.8	19.7	29.9
Related to Architecture and Engineering	278	37.6	31.1	44.1
Social Science and Related	535	46.2	41.6	51.2
Teaching and Related	1,860	74.1	71.5	76.7
University	192	51.7	44.5	58.9
Elementary, Secondary	1,309	82.3	80.4	84.1
Other Teachers	359	63.4	58.3	68.5
Medicine and Health	2,016	63.9	61.6	66.2
Health Diagnosing, Treating	75	36.1	24.7	47.5
Nursing, Therapy	1,535	73.3	70.5	76.0
Medicine and Health Related	406	39.3	34.0	44.6
Artistic, Literary, Recreational and Related	436	22.0	17.8	26.2
Clerical and Related	6,375	31.3	29.8	32.8
Stenographic and Typing	1,509	26.4	23.7	29.1
Bookkeeping and Related	2,031	17.1	15.2	19.0
Office Machine and EDP	312	24.9	19.8	30.0
Material Recording, etc.	591	40.6	36.4	44.8
Reception, Mail, etc.	741	42.9	38.8	47.0
Library, File, Correspondence	1,191	43.3	40.1	46.5
Sales	2,622	9.0	7.8	10.2
Commodities	2,273	7.8	6.5	9.1
Services and Other	349	15.2	11.2	19.2

Estimates of Unionism Confidence Intervals at 95 Percent Level.(continued)

	Number of Sample Observations	Estimate of Percent Unionized	Confidence Interval Lower Limit	Confidence Interval Upper Limit
Service	4,914	28.5	27.0	30.0
Protective	644	50.0	45.8	54.2
Food, Beverage, etc.	2,058	20.7	18.5	22.9
Personal, Apparel, etc.	824	21.1	18.1	24.1
Other Service	1,388	32.6	29.7	35.5
Farming, Horticulture, etc.	490	10.6	6.7	14.5
Other Farming	464	11.2	7.1	15.3
Fishing, Hunting, Trapping	52	42.2	20.1	64.3
Forestry and Logging	241	41.7	33.2	50.2
Mining, Quarrying, Oil and Gas	308	41.4	33.9	48.9
Processing Occupations	1,355	58.3	54.9	61.7
Food and Beverage	603	49.8	44.8	54.8
Other Processing	752	63.4	60.0	66.8
Machining and Related	682	55.9	51.8	60.1
Metal Shaping and Forming	406	56.0	50.4	61.6
Other Machining	276	55.7	49.5	61.9
Product Fabricating, Assembling and Repairing	2,827	46.0	43.3	48.7
Metal Products	282	64.4	59.5	69.3
Electrical, Electronics	441	53.0	48.1	57.9
Textiles, Furs and Leather	367	34.0	28.9	39.1
Wood Products, Rubber, Plastic	481	42.3	37.3	47.3
Mechanics and Repairmen	1,256	42.8	39.6	46.0
Construction Trades	1,784	56.9	53.9	59.9
Excavating, Grading, Paving	319	63.4	56.9	69.9
Electrical Power, Lighting and Wire Communications	352	70.7	65.1	76.4
Other Construction	1,113	51.2	47.7	54.7
Transport Equipment Operators	1,356	45.3	42.2	48.4
Motor Transport Operators	1,106	40.1	36.9	43.3
Other Transport Operators	250	71.7	64.4	78.0
Materials Handling	882	49.0	45.4	52.6
Other Crafts and Equipment Operating	476	53.4	48.1	58.7

Estimates of Unionism Confidence Intervals at 95 Percent Level.(continued)

	Number of Sample Observations	Estimate of Percent Unionized	Confidence Interval Lower Limit	Confidence Interval Upper Limit
INDUSTRY				
Agriculture	523	2.3	0.4	4.2
Forestry	283	36.6	28.8	44.4
Fishing	55	48.9	25.4	72.3
Mining	833	32.8	28.6	37.0
Metal Mining	201	55.2	47.5	62.9
Mineral Fuel	280	19.2	13.4	25.0
Non Metal Mines	107	74.5	60.0	89.0
Manufacturing	5,739	45.0	43.6	46.4
Food and Beverage	964	47.3	43.3	51.3
Tobacco	17	43.3	23.6	63.0
Rubber and Plastic	221	41.4	34.5	48.3
Leather	78	34.8	24.9	44.7
Textile	152	54.1	45.1	63.1
Clothing	322	32.1	26.8	37.4
Wood	485	52.2	46.6	57.8
Furniture, etc.	142	41.6	33.1	50.1
Paper and Allied	470	73.1	68.4	77.8
Printing, Publishing	400	26.1	21.6	30.6
Primary Metals	326	56.3	50.7	61.9
Metal Fabricating	346	40.7	35.8	45.6
Machinery Industries	237	36.6	30.3	42.9
Transportation Equip.	553	67.3	63.5	71.1
Electrical	379	33.1	28.8	37.4
Non-Metallic Minerals	150	47.5	39.5	55.5
Petroleum and Coal	76	21.3	11.3	31.3
Chemical	237	26.8	21.3	32.3
Miscellaneous	184	27.6	21.5	33.7
Construction	1,397	38.8	35.9	41.7
General Contractors	632	35.9	31.5	40.3
Special Contractors	765	41.4	37.3	45.5
Transportation, Etc.	2,926	60.0	58.0	62.0
Transporation	1,544	54.9	51.7	58.1
Storage	63	33.1	16.9	49.3
Communication	901	67.7	64.1	71.3
Utilities	418	64.1	59.3	68.9

Estimates of Unionism Confidence Intervals at 95 Percent Level.(continued)

	Number of Sample Observations	Estimate of Percent Unionized	Confidence Interval Lower Limit	Confidence Interval Upper Limit
Trade	6,065	12.5	11.5	13.5
Wholesale	1,465	12.6	10.6	14.6
Retail	4,600	12.4	11.3	13.5
Finance, Insurance and Real Estate	1,688	9.2	7.8	10.6
Finance	912	6.0	4.3	7.7
Insurance Carriers	337	14.3	10.4	18.2
Insurance Agencies and Real Estate	439	11.5	8.2	14.8
Services	11,344	38.1	37.0	39.2
Education and Related	2,917	70.1	68.0	72.2
Health and Welfare	3,597	55.5	53.4	57.6
Amusement and Recreation	300	12.7	8.2	17.2
Business Management	1,024	6.2	4.7	7.7
Personal	523	7.8	5.0	10.6
Accomodation and Food	2,103	10.0	8.5	11.5
Miscellaneous	603	12.9	9.8	16.0
Public Administration	2,931	66.6	64.6	68.6
Federal	1,022	67.9	64.8	71.5
Provincial	1,074	68.4	65.3	71.5
Local	831	63.4	60.0	66.8

Notes: Confidence intervals were computed from the estimates of the coefficients of variation as Supplied by Statistics Canada, Household Surveys Division, Survey of Union Membership 8412 Microdata Documentation, September 1985. The calculated coefficients and therefore the confidence intervals are approximate and crude, and are by no means official.

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Enquiries

The Director
Industrial Relations Centre/
School of Industrial Relations
Queen's University
Kingston, Ontario
Canada K7L 3N6
Telephone (613) 545-2193